DRAWINGS:

The attached sheet (sheet1 1/2) of drawings include changes to Figure 2, and replaces the original sheet 1/2 with Figures 1 and 2. In Figure 2, previously omitted reference descriptive textual labels have been added. A copy of sheet 1/2 is faxed along with this Amendment, and a new copy will be mailed separately.

The attached sheet (sheet 2/2) of drawings include changes to Figure 4, and replaces the original sheet 2/2 with Figures 3 and 4. In Figure 4, previously omitted reference descriptive textual labels have been added. A copy of sheet 2/2 is faxed along with this Amendment, and a new copy will be mailed separately.

REMARKS:

General

By the above amendment, applicant has amended the specification along the following lines:

1. Amendment to page 16 provides the definition of a concept which is related to the invention. The purpose of adding this definition is to provide a clearer wording to the new form of Claims 1 and 15.
2. Amendment to page 17 provides a clearer description of Figure 2, in order to complement the new textual labels that were added as required in the Office Action.
3. Amendment to page 20 provides a clearer description of Figure 4, in order to complement the new textual labels that were added as required in the Office Action.
4. Amendment to page 22 provides a clearer background for claim 33, which, as described in the Office Action, was not described in the Specification.

to introduce certain terms that will allow a clearer wording of amendments to claim 1 and 15. Also, applicant has amended the Specification to provide an enhance description of Figures 2 and 4.

Applicant has amended the drawings as indicated to correct missing text labels.

Also, applicant has amended several claims to define the invention more particularly and distinctly to overcome the technical objections and to better define the invention over prior art. The prior art that has been contemplated in more detail are:

1. US patent application 2005/0065955 (the Babikov application),
2. US patent 6,760,721 (the Chasen patent) and
3. US patent 6,167,396 (the Lokken patent).

Detailed description of the amendments performed on each claim

In order to facilitate the Examiner the inspection of the claim amendments, the most important ways in which claims have been amendment are summarized in this section. The next sections in this amendment provide the reasoning behind these amendments:

Claim 1:

- A processor and a memory have been explicitly included in the claim as to comply with technical objections in the Office Action. Some parts of the claim related to these aspects have been eliminated in order to make a clearer wording.
- The term 'type of object' has been used to replace 'entity type' in order to more clearly present the claim.
- Point v.a. is included to define the invention over the Chasen patent.
- Point v.b. is included to define the invention over the Chasen patent and the Babikov patent.
- Point vi. is included to define the invention over the Babikov patent.

Claim 2:

Some parts of the claim have been eliminated in order to make a clearer wording.

Claim 4:

The wording has been changed in order to comply with formal objections.

Claim 8, 9, 10, 11, 12:

A clearer wording is provided.

Claim 14:

A clearer wording is provided and change of dependence. Originally, by mistake, this claim was dependent on claim 11, rather on claim 13 which can clearly seen that was the previous claim on which claim 14 dependd.

Claim 15:

Amendment follows the amendment to claim 1, the system version of this claim.

Claim 16:

Amendment follows the amendment to claim 2, the system version of this claim.

Claim 22:

Amendment follows the amendment to claim 8, the system version of this claim.

Claim 23:

Amendment follows the amendment to claim 9, the system version of this claim.

Claim 25:

Amendment follows the amendment to claim 11, the system version of this claim.

Claim 26:

Amendment follows the amendment to claim 12, the system version of this claim.

Claim 27:

Amendment follows the amendment to claim 13, the system version of this claim.

Claim 28:

Amendment follows the amendment to claim 14, the system version of this claim.

Claims 32 and 33:

Both claims have been made directly dependent on claim 15 in order to facilitate inspection of the claim.

Also both claims recite now a computer storage medium.

Claim 34:

The new wording further defines the invention over the Babikov patent.

Claim 35:

Amendment follows the amendment to claim 34, the system version of this claim.

Claim 36:

It is a new claim, and it is the method version of claim 4

Remarks according to Objection 4

(A descriptive textual label was required for two drawings)

New drawing sheets are provided as requested in this objection.

Remarks according to Objection 5

(The expressions "A system" and "A method" were objected)

Claims have been amended as requested in this objection.

Remarks according to Objection 6

(Claim 33 was objected as there was no definition provided in the specification of the term "computer readable medium").

The specification has been amended to provide definitions and context for claim 33.

Remarks according to Objection 8

(Several claims were objected as being directed to non statutory subject matter)

Claim 1 has been amended to better define the physical properties of the system sought to be protected.

Applicant respectfully requests assistance from the Examiner as to how rewrite claim 33 in a manner that complies with 35 U.S.C.

Remarks according to Objection 10

(Several claims were objected as being indefinite)

Claims have been amended to eliminate words that render claims indefinite or ambiguous.

Remarks according to Objection 12

(Several claims were objected under U.S.C. 102(b) as being anticipated by Greef et al (US Pat 6,397,221)

(The analysis of the objections will be carried out upon the system claims. Applicant considers that the same reasoning can be applied to the method version of those claims)

In the analysis that follow, the word "node" and the word "entity" are used with a similar meaning. A node is part of a tree. An entity is an element of the world. Because the entities are organized in the tree, each entity takes the place of a node. Hence, the words "node" and "entity" will be used interchangedly in the analysis.

In any classification, there are three types of entities:

1. Instance entities: these are the objects of the world that are to be classified.
2. Category entities: these are the groups of objects that are created in the classification. Instance entities (the objects) in a category entity (in a group) share one or more characteristics.
3. Criterion entities: these are the criteria used to define the groups. For example, if objects are computers, one criteria can be whether the objects have a type of hard drive, and other criteria can be whether the objects have one or two disc units.

What the user need is a way to organize the three types of entities in a simple yet powerful fashion. This is what the current application provides.

Regarding Claim 1

Applicant considers that classification system disclosed in the Greef patent is different from the classification system disclosed in the current patent application.

It is recognized that there might be a semantic ambiguity in the wording of Claim 1, in what respects to the utilization of the word "entity" when referring to the types of instance-entities. It uses the word "entity" in with two different meanings, and that might be misleading:

1. On the one hand, the word is used to identify the different kinds of nodes "criterion entities", "category entities" and "instance entities".
2. Then, it is also used to indicate that "instance entities" can correspond to any entity type belong to any realm of reality. This sentence will be amended to say that "instance entities can correspond to any object type in any realm of reality".

Therefore, the claim will be amendment to make this part clearer.

Apart from that, the following paragraphs will deeply explain the differences between the current application and the Greef patent. The main difference is that the current application discloses the utilization of different types of nodes: nodes which are "category-entities" and nodes which are "criterion-entities", while the Greef patent discloses only the utilization of nodes which are categories. (Also, nodes which are instances are present in both inventions).

This is to say, nodes in the Greef patent are all of the same type (categories) that correspond to different objects in the real world (Portable Systems, Desktop Systems, Laptop Systems and so on). But they are all the same type of node: just categories.

In contrast, the nodes in the current application are at least of two types:

- Category entities (just categories) : these are the usual nodes in all classifications. They are entities that restrict the part of the world to which its offspring belong. Category nodes can the parent nodes to instance entities or parent nodes to other category entities.
- Criterion entities: these entities are the main feature in the present patent application:
  - Criterion entities do not restrict the part of the world to which its offspring belong. They just indicate a criterion that defines the categories that come after.

- Therefore, in a well formed classification, criterion entities will not be parent nodes to instance nodes. However, they can be parent nodes to other category nodes, or they can be child nodes to category nodes.

In order to better illustrate this difference, Exhibits 1 and 2 show a small classification that uses some categories present in Figure 4 of the Greef patent.

As shown in the Exhibits, a category entity "Portable Systems" can be a parent node to instance entity ".dell inspiron 6000.", but a criterion entity "According to portability" cannot be the parent node of instance entity ".dell inspiron 6000.". However, the criterion entity "According to portability" can be the parent node to a category entity "Portable Systems".

Exhibit 1

According to portability

Portable Systems (Correct)

.dell inspiron 6000. (Correct)

Desktop Systems (Correct)

Exhibit 2

According to portability

.dell inspiron 6000. (Incorrect)

Desktop Systems

It must be emphasized the fact that the main difference between "criterion entities", "category entities" and "instance entities" is formal and structural, and that it affects the way the tree can be formed and managed.

The invention provides a very simple yet powerful way to create and manage multicriteria taxonomies. Classification techniques are a very important part of informatics, and classifications are used in most websites. However, despite its importance, this has been a

long standing problem in any classification system, especially in computerized classifications. It has not been adequately solved till now.

Traditionally, the way to approach this problem was double:

1. Create taxonomies in which categories that belong to different criteria are intermixed (as explained in the specification of the current application)
2. Create different computer controls for different criteria.

An evolution of solution 2 can be seen in some web sites that implement catalogs:

3. For example, in www.sears.com/shc/s/v_10153_Tools?adCell=AH. In these cases, several items are organized in a tree-like fashion, and there are some items that resemble criterion nodes. In the example above, the user can "search by category" (type) or can "search by brand". These two phrases are similar to criterion nodes.

Three other patents and patent applications have been directed to partially solve the problem. These patents are analyzed in detail in the next sections, and briefly discussed here:

4. US Patent 6,167,396 (granted to Lokken): This patent presents a way to navigate multidimensional databases, which are a similar type of entity as multicriteria taxonomies. It allows the user to easily navigate the database, but it does not advance a solution for the creation and management of the objects in the database.
5. US Patent 6,760,721 (granted to Chasen et al): This patent is the first step towards introducing criterion nodes in a tree structure. It is a useful patent, but it is a limited solution, and it does not take the technique of criterion nodes as far as it can go.
6. US Patent Application 2005/0065955 (filed by Babikov et al): This invention uses criterion nodes in a broader way, but it is a complex solution that has a number of limitations, as will explained in the sections below.

The current patent application is a step forward with respect to the previous solutions. It uses criterion nodes in a most versatile way, and lacks the limitations of the alternative approaches to the problem.

The main difficulty in solving the problem was realizing that both criterion nodes and category nodes can be freely intermixed in a taxonomy, (category nodes being parent nodes to criterion nodes and criterion nodes being parent nodes to category nodes), thus providing much needed flexibility. Realizing this requires a conceptual leap that had not been previously done.

After having clarified the nature of Claim 1, applicant believes that the objections of the remaining dependent Claims should be interpreted with a different perspective. However, in what follows the objections to these claims will also be analyzed.

Regarding Claim 2

The main objection to Claim 2 is related to Fig 4, where it illustrates a plan for modification for organization 88, introducing a frame 278 shown in dotted lines, (col. 23 line 53 to col. 24 line 3).

Applicant considers that the new nodes shown in the frames 278 and 290 in dotted lines are category entities, and that have the same type as the categories 90 and 92. Despite the fact that they have different attributes (for example, having hard drive or not), this attributes merely serve to make the nodes be different types of categories, or host different types of objects (computers with hard drive and computers without hard drives)

This is to say, all these nodes could conceptually be parents of a hypothetical instance node ".XYZ 6000." This instance could be the child node to any of them (providing that the technical characteristics of the laptop. So none of these nodes is a criterion nodes, because criterion nodes cannot be the parents to instance nodes.

Regarding Claim 4

After the clarification to claim 1, applicant considers that it is clear that the Greef patent does not contain criterion nodes. Because of that, criterion emphasizing is not a feature of the Greef patent.

At the same time, applicant considers that none of the nodes in Figure 5 in the Greef patent is emphasized. It can be seen that the text style and font of all the nodes is the same. And the actual text used is always the strict name for the category, without any additional text fragment such as "According to" or equivalent.

Regarding Claim 5

Greef, col 19, lines 36-51: Applicant considers that in this fragment Greef is disclosing a step by step process to manipulate entities, but it never mentions the showing of any summary tree that can provide the user with a fast way to check what nodes of the tree have been selected.

Regarding Claim 8

This claim has been now deleted.

Regarding Claim 9

Applicant considers that the cited fragments in the Greef patent do not disclose the same process by which instance entities are

4. Assigned to different category nodes
5. Given codes that correspond to the category entities to which they are assigned.

The claim is presented with a new wording to more clearly describe its nature.

Regarding Claim 10

This claim describes general computer processes. The newness of the claim is due to the fact that it is a dependent claim on claim 1

The method disclosed in the Greef patent is similar to the method disclosed in the current patent application. In fact, most classification systems allow for updating of the associated database.

The main difference in the current application is that the current patent application comprises criterion entities, which are introduced in claim 1.

Regarding Claim 11

As was clarified before, the Greef patent does not contain Criterion Entities, and this claim is directed towards Criterion Entities, with the purpose to help the user to more easily distinguish them from Category Entities and Instance Entities. Therefore this claim should be considered to be different from the processes disclosed in the Greef patent.

Regarding Claim 12

Greef, col 19 lines 36-51: Applicant considers that the process disclosed by the Greef patent is the opposite to what is described in claim 12.

- The process in the Greef patent is directed towards selecting tabular records and importing them into the hierarchical structure.
- The process in the current application is directed to identify objects (records) that are al ready existing in the hierarchical structure.

Additionally, applicant requests the Examiner to take into account to review the newness of this claim in light of the new wording of claim 1 and of the explanation given about it.

Remarks according to Objection 14

(Several claims were objected under U.S.C. 103(a) as being unpatentable over by Greef et al in view of Szabo (US Pat 6,868,525)

(The analysis of the objections will be carried out upon the system claims. Applicant considers that the same reasoning can be applied to the method version of those claims)

Regarding Claim 13

The main difference between the procedure disclosed in this fragment of the Szabo patent and the classification procedure claimed in the current application are described below:

Szabo, col 39 lines 3-15: The character strings used in Szabo, such as "baseball" or "sports" are general keywords used for retrieving the searched objects. These words are similar to the classification codes mentioned in the claim. However, said classification codes used in the claim do not necessarily have semantic content, while the words used by Szabo do have semantic content. This is a first difference: a user could not use the Szabo procedure if the

classification string had no semantic content: i.e. the Szabo procedure could not be utilized if it makes use of the classification codes described in the current patent application.

Szabo, col 39 lines 3-8, and col 37 line 66 to col 38 line 13:: The Szabo patent does not explicitly describe how the classification strings are associated to the searchable objects. However, it can be inferred from the patent that this is done through indices. This is supported by the numerous references to indices, such as in col 23 line 14, col 33 line 57,col 38 lines 60 and 62, col 39 line 58, col 46 line 16 and 39, col 47 line 9 and line 13.

An index is characterized by the following:

1. It uses a table whose entries are the possible classification strings (each record belongs to one classification string)
2. A number of objects are associated to each classification string (i.e. to each record)
3. When the user performs a query on a classification string, the system gets the record assigned to that classification string, and returns the objects that are associated to it.
4. The process is repeated and the results combined, when the query is a boolean expression comprising several classification strings.

The procedure disclosed in the current patent works in the opposite way.

1. It links the classification strings that are associated to an object, and
2. It stores the classification strings in the record that belongs to the object.

The procedure in the current patent application concatenates the classification codes. For example, if the codes are "11", "35" and "32", the concatenation might be "11.35.32". The Szabo patent does not disclose a process like this one.

What Szabo discloses in this paragraph is related to how queries are built. This is the part that is similar to the current application, but applicant considers that the rest of the claim is significantly different. When a query is to be performed using those classification strings, the internal query in the system might be " 11 OR 35 AND 32", which is similar to the possible result in Szabo "sports AND bats"

However, it must be emphasized that the specific process disclosed in the current application, which is related to concatenation, is very different from the processes disclosed in Szabo.

Szabo, col 47 line 37-43 and col 47 lines 51-63: The main difference between claim 13 and the Szabo patent is that the Szabo patent does not disclose the utilization of separating characters for separating the classification codes.

Szabo, col 23 line 55-59: The Szabo patent discloses the storing of a preference profile for the user, and this profile is utilized to guide his/her searches. However, the current application does not disclose the utilization of a user's preference profile.

Furthermore, as was mentioned before, the Szabo patent does not disclose the mechanisms utilized in the current application by which searchable objects (instance entities) are associated with classification strings.

In fact, given that the Szabo patent seems to use an index, its mechanism for carrying out searches is different from the mechanism utilized in the current application.

1. In the Szabo patent there is a table whose entries (records) are strings taken from the objects, and different objects are assigned to each string.
2. In the current patent application, the entries of the record are the searchable objects themselves, and it is the classification strings that are assigned to them.

Regarding Claim 14

Szabo, col 17 line 47-53, and col 38 line 58 to col 39 line 15: This fragment of the Szabo patent describes how performing searches on a tree of concepts can be useful for the user, but it does not disclose how the specific search process is to be carried out.

Because the Szabo patent is based on an index, it is assumed that the actual search is carried out by exploring the records assigned to the different classification strings.

The search in the current patent application is performed in a very different way. It is carried out by searching the records assigned to the objects themselves, by exploring the fields associated to the classification strings. It can be seen that the process is precisely the opposite.

Remarks on references not relied upon in the Office Action

US Patent Application US 2005/0065955 (the Babikov application)

This patent application is directed to solving a problem in the same technical area as the current patent application, therefore it has some similarities with the current application. However, it also has important differences, as will be seen in this analysis. This analysis will show the differences between both applications and the advantages of the current application.

There are three important differences between the Babikov application and the current application. These three differences are not identified by a specific name in any of both patent, but in this analysis they will be given a name to facilitate the exposition. These three differences are:

1. Criteria replication
2. Criteria flooding
3. Criteria emphasizing

Criteria replication:

The nature of this feature is to assign the same criteria node to different positions in the tree, as can be seen in Figure 12 in the Babikov application. This will be explained in more detailed in this analysis.

For example, imagine that we have the following classification for nouns, in which there are three basic criteria that can be applied to all nouns:

1. "According to nature" (indicated with numeral 100),
2. "According to meaning" (indicated with numeral 200), and
3. "According to countability" (indicated with numeral 300).

The crierion nodes will be shown with a text starting by "According to", and they will be underlined. The "+" and "-" signs indicate whether the nodes are collapsed or expanded. Expansion and collapsing signs where not used in the specification of the current application because they were not necessary to explain the invention; however, they are necessary for this analysis.

The Exhibit shows this possible classification, in which all criteria nodes are collapsed. As can be seen, the three criteria can be applied to all categories and instances in the Noun group.

Exhibit B1

- Noun
  + According to nature (100)
  + According to meaning (200)
  + According to countability (300)

In order to see what Criteria Replication is, Exhibit B2 shows a new view on this classification, in which some nodes are expanded. An instance node (.hammer.) is also shown in different positions to facilitate the exposition. It is understood that there might be many more instance nodes, category nodes or criterion nodes in the classification, but they are not shown to facilitate the exposition.

Exhibit B2

- Noun
  - According to nature (100)
    + Entity (500)
    + Attribute (600)
    + Event (700)
  - According to meaning (200)
    - Has utilization (400)
      - According to nature (100b)
        - Entity (500b)
          .hammer. (800-1)
        + Attribute (600b)
        + Event (700b)
      - According to countability (300b)
        + Countable

+ Uncountable
+ Has function
+ Has relationship
+ Other
- According to countability (300)
+ Countable
+ Uncountable

It can be seen that the criterion nodes 100 "According to nature" and 300 "According to countability" have been replicated in position 100b and 300b respectively, under the category "Has utilization".

This can be done because those two criteria (along with criterion 200 "According to meaning") can be applied to all categories and instances in the Noun group, as was stated in Exhibit B1. This is to say that instances such as .hammer. could appear both in the branch that is headed by 100 "According to nature" or in the branches headed by the other two criterion nodes.

Only two of the three criteria are replicated, because they are replicated in a branch that depends already on the third criterion (200 "According to meaning"). It would not make sense to replicate a criterion node within itself.

It can be seen that the instance node .hammer. appears in position 800-1. It is placed in that position because it is an "Entity" and it also "Has utilization", which means that it belongs both to category "Entity" (500 and 500b) and to category "Has utilization" (400). Within category 400 "Has utilization", it is placed under the category 500b "Entity".

The instance ".hammer." is not explicitly shown under the category 500 "Entity" because that category node is collapsed. The category is collapsed in order to more clearly show the feature of Criteria Replication, as will become clearer in the next paragraphs.

As can be seen, the main fact in this classification is that it replicates criterion nodes in different positions.

It can be seen that a similar classification as that one could be created according to the current invention, without Criteria Replication. It would be fully functional, as shown in Exhibit B3.

Exhibit B3

- Noun
  - <u>According to nature</u> (100)
    - Entity (500)
      .hammer. (800-0)
    + Attribute (600)
    + Event (700)
  - <u>According to meaning</u> (200)
    - Has utilization (400)
      .hammer. (800-1)
    + Has function
    + Has relationship
    + Other
  - <u>According to countability</u> (300)
    + Countable
    + Uncountable

It can be readily seen in Exhibit 3 that the criteria nodes have not been replicated. In this Exhibit, instance ".hammer". is shown in both positions 800-0 and 800-1. As mentioned before, ".hammer." is both an "Entity" and "Has utilization", so it belongs to both categories.

The feature of criteria replication is best described in the Babikov application in paragraph 0177, where it is stated that "If an available free criterion is not used for a specialization, it will stay available at the next specialization level, thereby appearing again in the list of free criteria".

Even though this is a small classification, which is intended only for explanatory purposes, it can be easily seen that Exhibit B3 is easier to handle, and it clearly shows that ".hammer." belongs to categories that are created under different criteria.

Criteria Replication has the purpose of showing to the user what instances belong to categories that belong to different criteria (in this case, "Entity" and "Has utilization"). However, even though it does it at the cost of higher complexity and difficulties for the user, as can be easily seen.

The current invention allows the user to see exactly that with a different approach which does not require to increase the complexity of the classification by using criteria replication

This approach is described in page 5 (lines 29-35) and page 6 (lines 1-6) of Specification of the current application. It is based on querying the database imposing the condition that the instances retrieved must belong to both categories.

Criteria Flooding

Criteria Flooding is a feature that inserts a criterion node as a child node (and as a parent node) of each category. This means that between any parent-child category pair, there is a criterion. The Babikov application does not give any name to this feature, but the name of "Criteria Flooding" will be used here in order to facilitate the exposition.

First, a it must be noted a difference in terminology between the current patent application and the Babikov application:

- In the current patent application, "categories" are all the different subgroups that can be created after each "criteria", and they are represented as nodes in the tree. This can be seen for example in Exhibit 2 in the current application, where categories are the nodes represented by text that is not underlined and not enclosed in character ".". It can be seen that category nodes can have other category nodes either as children, as parent or both. When different subsets of instances are to be identified, the patent

application allows for composition of these categories using boolean operators, such as is described in page 19, in lines 4-20.

- In the Babikov application, the previous "categories" are more generally identified with "branches" (as indicated in page 13, paragraph 0177). Each criterion is associated to a number of branches, (which in turn specify attributes). In the Babikov application, categories are created when different attributes are specified.

"Criteria flooding" means that in the tree structures created with the invention of the Babikov application, the child nodes of criterion nodes are associated with branch (or attribute) nodes, and the child nodes of branch nodes are criterion nodes. This is to say that in these types of trees, there are criterion nodes inserted between any pair of branch (or attribute) nodes.

This can be seen in the following parts in the Babikov application.

- Figure 12: This Figure shows a tree interface that is created to utilize the invention. It contains criterion nodes and branch nodes. As indicated in paragraph 0177, criterion nodes have an icon that is represented by a pair of vertical arrows, and branch nodes have an icon that is represented by a horizontal arrow. It can be seen that no branch node is the child node of any other branch node. There is always a criterion node between two branch nodes..
- Paragraph 0086: These paragraphs introduce the description of specific embodiments, and their content is applied to all embodiments. As stated in the paragraph, each criterion creates a denumerable set of more specific subcategories. Nothing is said about branches creating a denumerable set of more specific branches.
- Figure 13: Where again it can be seen that criteria are inserted between any pair of branch nodes.
- Figure 16: Where, again, there is a strict alternation between criteria and branches.
- Figure 3 and paragraph 0031: This Figure relates to faceted classifications, discussed as prior art. In the Figure, two boxes show category nodes that are parent of other category nodes (nodes 320 and 316). However, this is not considered in the invention of the application. Moreover, the application explicitly states that faceted classifications have a number of important disadvantages: "Unfortunately, faceted classifications include a number of limitations".

- Paragraph 0122-0124: This paragraph says that a criterion partitions a set A into mutually disjoint categories A(i) (associated to attributes and branches). If some categories where child nodes of other categories, they would not be disjoint, because the child ones would be included in the parent one.
- Figures 11, 14, and 15: This Figures describe alternative data models that support the invention. Nothing in this data model suggests that some branches/attributes can be parent nodes of other branches/attributes.
- Paragraphs 0161-0167: These paragraphs describe what categories are to be stored in different embodiments, and nothing is said about some categories being child/parent nodes of other categories.
- Paragraph 0124: This paragraph defines the cardinality of a criterion as the number of branches it has. Nothing is mentioned about branches having branches itself.
- Figures 17 and 18: At first, it might seem that Figure 17 indicates that the invention includes cases in which branch nodes can be parent of other branch nodes. But the description of these Figures proves otherwise (paragraphs 0316 and 0317). Figure 17 is just an arbitrary classification taken as example. Figure 18 indicates that this classification could be created using three criteria. However, the last three lines in paragraph 0317 indicate that Figure 17 is to be represented as a classification in which a composite criterion generates four branches. Therefore, a criterion is supposed to exist between box A and boxes B1, B2, B3 and B4, despite it is not represented.

Criteria emphasizing

Criteria emphasizing is a feature used to assist the user to easily distinguish criterion nodes from category nodes. In the current patent application, criterion nodes can be emphasized by:

1. Inserting a specific text string, such as "According to "
2. Modifying the format of the text, either in color, underline, and so on

In the Babikov application, the only means used to emphasize the criterion nodes is the utilization of a different icon.

Discussion about the differences between the Babikov application and the current application.

Criteria Replication and Criteria flooding are features which are inherent in the Babikov application. They are intrinsically related to their approach to solve the multicrieria problem in such a way that the classification is "uniquely defined with a minimum of information". This can be seen in the next paragraphs:

- Paragraphs 0154 and 0161: Explains how with a minimum amount of information stored in the database, the polyhierarchy is induced, i.e. uniquely defined.
- Paragraph 0174: In this paragraph, it is stated that "Unlike with conventional classification methods, the supplementary software does not depend on application-specific features of the polyhierarchical classification and the complexity of the classification".
- Paragraphs 0320-0325: These paragraphs discuss several advantages of the invention, including compactness of descriptive data, flexibility of the classification and increased efficiency of interfaces.

In general, a stated goal of the Babikov application is to provide a simple system that does not require unnecessary multiplicity of trees and nodes nor cumbersome actions.

However, Criteria Replication, Criteria Flooding and the absence of Criteria Emphasizing are problematic for the user. This is to say, they are probably useful in order to create a system that uniquely defines the classification with a minimum of information. But on the other hand, they create concomitant problems for the user, in terms of an increase in nodes. Hence, creating a classification system that does not impose Criteria Replication and Criteria Flooding would be valuable for the user. This is the case described in the current patent application.

The following paragraphs show how the Babikov application is directed to building a simple system for the user. They strongly indicate how creating a polycriteria classification system without Criteria Replication and Criteria Flooding is a price they that the invention in the Babikov application has to pay. And that shows that creating a classification system without Criteria Replication and Criteria Flooding is new and non obvious.

- Paragraphs 0020,0021: "Another disadvantage of tree structured classifications relates to fast multiplication of sub-trees with increases in simultaneously applicable criteria". However, both Criteria Flooding and Criteria Replication increase the number of subtrees and the number of nodes.
- Paragraph 0025: This paragraph discusses the disadvantages of directed acyclic graphs, and states that "resolve the predefined path problem at the expense of an even more dramatic increase in the amount of descriptive data". However, again, both Criteria Flooding and Criteria Replication increase the number of subtrees and the number of nodes.
- Paragraph 0031-0032: These paragraphs describe the complexity problems of Faceted Knowledge Representation approaches, which "involve cumbersome mathematical constructions" and "become exasperating for the developer... and does not offer a clear logical approach to building classifications". It is assumed that a goal of the Babikov application is to provide an invention that overcomes these problems.

All this shows that, given the goals of the Babikov application, if building a system without Criteria Replication and Criteria Flooding was obvious, they would have done it, because it creates more simplicity for the user.

Furthermore, if adding Criteria Emphasizing was obvious, they would have add it, because it also helps the user to achieve a simpler interface.

Remarks on additional references not mentioned in the Office Action

Some other references that share some characteristics with the current application have become known to applicant in the last months. Below they are briefly analyzed and the advantages and differences of the current application over those applications are shown.

US Patent 6,760,721 (Chasen et al)

This patent discloses a system and method for managing metadata data. In particular, it is directed to managing data related to a music library.

In Figure 1 in the patent, they show the user interface utilized to embody the invention. It can be seen in the Figure that they use two different types of nodes in structure 124 which are similar to the nodes used in the current application:

1. Nodes labeled "Artist", "Album" and "Genre". This nodes are very similar to the criterion nodes of the current application.
2. Nodes labeled "Classical", "Pop", "Rock". This nodes are very similar to the category nodes of the current application.

The main differences with the current application are that the current patent application discloses the following:

1. Placing criterion nodes at any level, where the criterion nodes might have category nodes as parents. In contrast, in the Chasen patent, the criterion nodes are located at the uppermost level. Diagrams in columns 11, 12 and 13 in the Chasen patent show that the invention does not disclose placing Criterion nodes at intermediate positions. However, placing criterion nodes in order to subclassify instances belonging to any category is a very useful tool, as described in the current patent application. However, it is not something obvious at all. If it was obvious, the Chasen patent would include it.
2. Locating the criterion nodes as child nodes of other criterion nodes. This is also a very useful tool for aggregating criteria that share some characteristics. Again, if it was obvious, the patent would allow to do that.
3. Emphasizing criterion nodes with some distinguishing text/font type/text characteristics (such as bold or underlined text) in order to facilitate the utilization of the invention. In the Chasen patent, criterion nodes can be distinguished merely by the fact that they have a different type of icon. Once again, if it was obvious, the patent would disclose it.

US Patent 6,167,396 (Lokken)

This patent discloses a system for managing points in multidimensional databases. A multidimensional database shares some features with multicriteria classifications. This can be seen in Figure 3 in the Lokken patent. The dimensions (Time, Customers, Regions, and Products) are similar to criteria. However, they are not really criteria, because they are not used to organize categories and subcategories.

This patent would be similar to the Chasen patent (US 6,760,721) if Figure 3 was integrated with Figure 4A, 4B, 4C and 4D. This integration would generate a classification similar to the one showed in the following Exhibit. It can be seen that it is very similar to the tree showed in the Chasen patent, except that the categories contain different subcategorize.

Exhibit

- Dimensions
    - Time
        + 1997
        - 1998
            + Quarter 1
            + Quarter 2
            - Quarter 3
                July
                August
                September
            + Quarter 4
    - Customers
        + Direct
        + Indirect
    + Regions
    - Products
        + Accessories
        + PCs
        + Services

This patent provides a useful technique for navigating multidimensional databases (that is to say, multicriteria classifications). However, they do not get to the point of integrating dimensions (criteria) with categories, even though it would be a very useful invention. This shows that integrating those types of entities is not obvious at all (or at least, it was not obvious at the time).

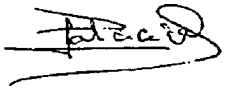
CONCLUSION

For all the above reasons, applicant submits that the specification and claims are now in proper form, and that the claims define all define patentably over the prior art. Therefore they submit that this application is now in condition for allowance, which action they respectfully solicit.

Conditional Request for Constructive Assistance

Applicant has amended the specification and claims of this application so that they are proper, definite and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. §2173.02 and §707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully



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Certificate of Facsimile Transmission: I certify that on the date below I will fax this paper to GAU 2169 of the U.S. Patent and Trademark Office at 571-273-8300.

2008 June 20th

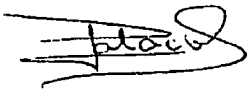

FIGURE 1

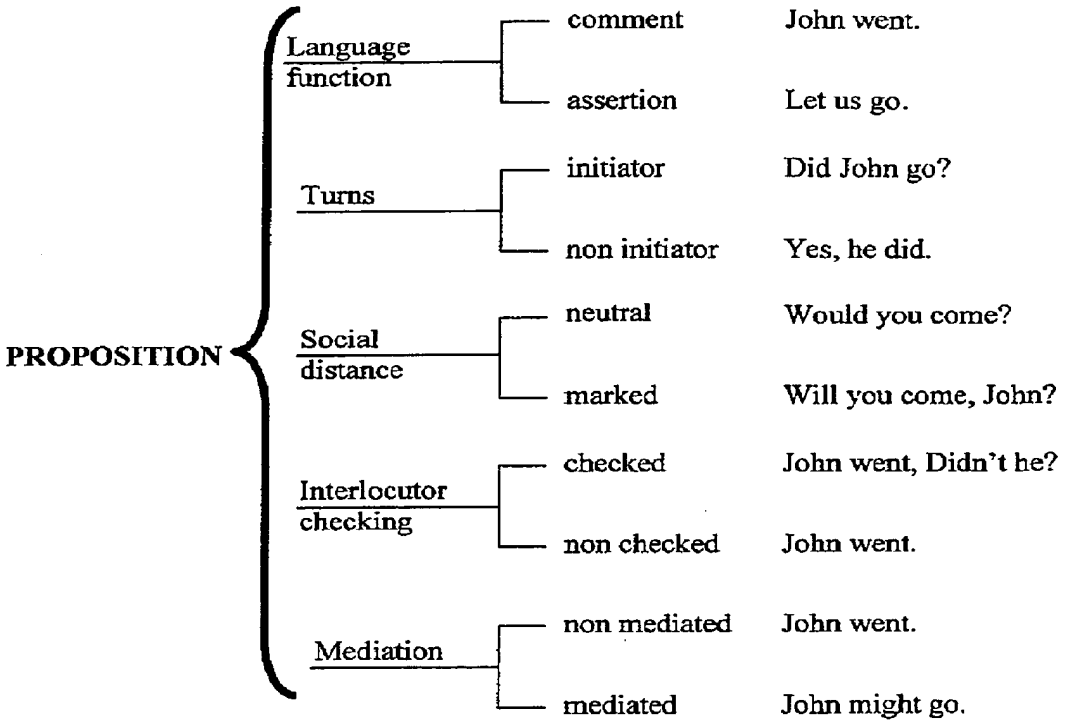

FIGURE 2

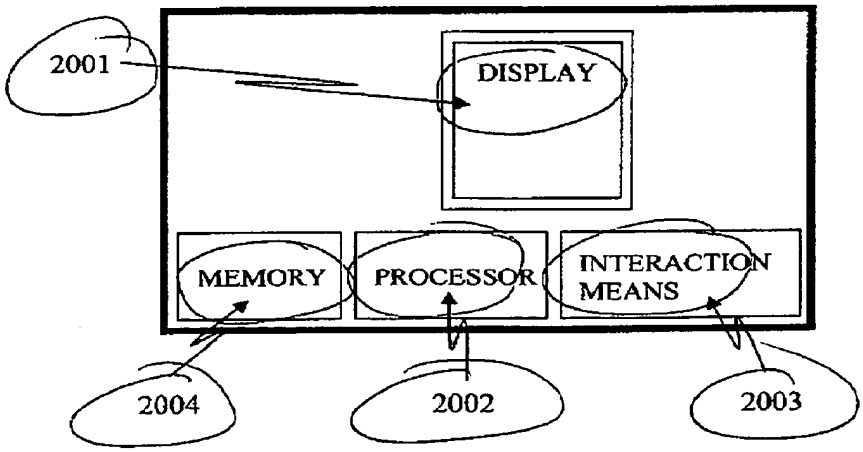

FIGURE 3

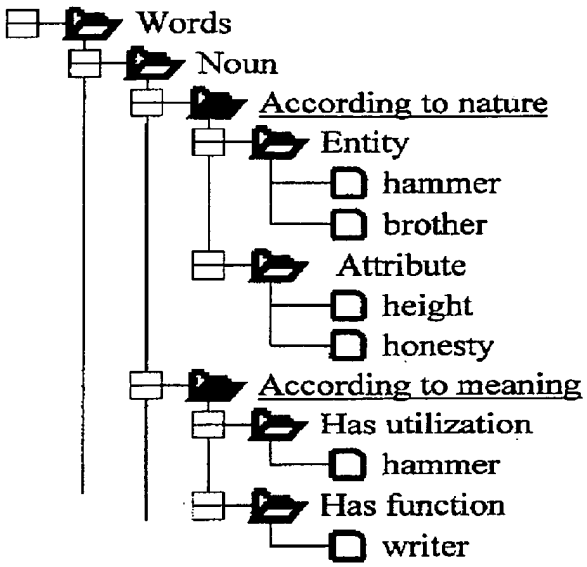

FIGURE 4